



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,852	03/24/2004	Lizhong Sun	026-0045	5481
22120	7590	04/27/2005		
ZAGORIN O'BRIEN GRAHAM LLP 7600B N. CAPITAL OF TEXAS HWY. SUITE 350 AUSTIN, TX 78731				EXAMINER LE, DINH THANH
				ART UNIT 2816
				PAPER NUMBER

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/807,852	SUN ET AL
	Examiner DINH T. LE	Art Unit 2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-34, 36 and 39 is/are rejected.
- 7) Claim(s) 35 and 37-38 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/24/04</u> | 6) <input type="checkbox"/> Other: ____ . |

DETAILED ACTION

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections

Claim Rejections - 35 USC § 112

Claims 1-33 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 1, it is unclear what the “first divide stage” and “divide stage earlier” is and how they are read on the preferred embodiment or seen on the drawings. Also, the description of the present invention is incomplete because the claimed divider does not have an input/output. Thus, the claimed divider may not perform the recited function. The same is true for reciting “input” in claims 2-4.

In claim 4, the recitation “respective divide stages” is confusing because it is unclear if these are additional “stages” or further recitation of the previously claimed “stages” on line 2 of claim 1.

In claim 5, the description of the present invention is incomplete because the claimed “duty-cycle stage” is not connected to anything. Thus, the claimed “stage” may not perform

function. Also, it is unclear where the “outputs” on line 2 come from. The same is true for reciting “self correction logic” in claims 8, 16 and 24, and “latch circuit” and “selection circuitry” in claims 9, 13 and 25.

In claim 9, it is unclear how the recitation “one or more portion” and “selection circuit” is read on the preferred embodiment. Insofar as understood, no such limitation is seen on the drawings. Also, it is unclear what the portion is and how the selection circuitry can implement the at least one multiplexer. The same is true for claims 17 and 25.

In claim 11, it is unclear how the stages can be “programmably coupled” to provide different divide ratios since the stages.

In claim 12, it is unclear how the recitation “at least multiplexer coupled to selectively couple an output of a first divide stage to an input of a second divide stage” is read on the preferred embodiment. Insofar as understood, no such limitation is seen on the drawings.

In claim 28, it is not understood how the divider can be “programmed” and how this step is read on the preferred embodiment or seen on the drawings. The same is true for claim 39.

In claim 31, the recitation “correcting a duty cycle” on line 1 is confusing because it is unclear if this is an additional “correcting step” or further recitation of the previously claimed “correcting a duty cycle” in claim 36. The same is true for reciting “correcting an abnormal state” on line 1 of claim 33.

The remaining claims are dependent from the above claims and therefore also considered indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 11-12, 19-20, 27-28, 30, 34, 36 and 39 are rejected under 35 USC 102 (b) as being anticipated by Hassoun (US 6,061,418).

Hassoun discloses in Figure2A-2B, 3A-3B and 5 a divider circuit comprising:

- a sequence of divide stages (310_1 to 310_N) coupled to provide a plurality of difference divide ratios;
- a means for correcting a duty cycle (530, Figure 5); and
- at least one multiplexer (320, 330) coupled to selectively feedback the output of a first divide stage (310_2) to an input of divide stage (310_1) earlier in the stages.

With regard to claim 2, at least one input (F_CTRL) coupled to receive a programmable control signal indicating which of the plurality of different divide ratios to apply.

With regard to claim 19, the output clock signal of Hassoun is equal to the frequency of the input clock signal divided by any integer up to a maximum integer, lines 20-26, column 2. Therefore the divider ratios can be select to have 1/11, 1/9, 1/7, 1/6, 1/5 and 1/4.

Allowable Subject Matter

Claims 5-10, 13-18, 21-26, 29-33, 35 and 37-38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The claims are allowed because the prior art of record does not show:

- a duty-cycle stage coupled to correct a duty cycle of outputs having an odd divide ratio as combined in claims 5, 13 and 21.
- wherein respective ones of the divide stages include an activation input coupled to receive an activation signal to selectively turn off respective divide stages if the respective divide stages are not used for a selected divide ratio as combined in claims 7, 15, 23 and 35.
- a self correction logic as combined in claims 8, 16 and 24.
- a means for correcting an abnormal stage as combined in claims 32 and 37.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DINH T. LE
PRIMARY EXAMINER

